

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 07

BCA (Sem.-2)
OBJECT ORIENTED PROGRAMMING USING C++

Subject Code : UGCA-1909

M.Code : 77417

Date of Examination : 13-12-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Explain :

- a) How are data and functions organized in a procedure-oriented program? Compare it with OOP.
- b) What is function prototype? How are they defined?
- c) What are the advantages of reference variables in parameter passing?
- d) What is the purpose of the scope resolution operator?
- e) What is the lifetime and scope of a variable?
- f) Distinguish between a class and an object.
- g) What are the characteristics of a constructor?
- h) What are the implications of public, protected and private visibility modes?
- i) Can operator precedence be changed through operator overloading?
- j) What are the characteristics of a constructor?

SECTION-B

2. Discuss the principles of object-oriented programming.
3. Write a program in C++ that illustrates the concepts of function overloading and function-overriding.
4. Write a program in C++ to create a database of the following items of the derived class. Name of the patient, Sex, Age, Ward number, Bed number, Nature of illness, Date of admission.

Design a base class consisting of data members *viz.* name of patient, sex and age and another base class consisting of ward number, bed number and the nature of illness. The derived class consists of data member, date of admission, Program should carry the following methods :
 - a) Add new entry
 - b) List the complete record.
5. Distinguish between single and multiple inheritances.
6. Write a program to swap the two arrays of members by pointers, by reference and by value. Compare the three ways.
7. What are pure virtual functions? Explain with example(s).

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.